COGNITIVE COMPUTING

Major productivity gains will be unlocked by the wave of autonomous computational systems. These systems will respond to the environment by themselves, without pre-programming.

These are systems that can sense, learn, infer and interact.

AI ON THE RISE

Recent breakthroughs have unleashed AI today. Inexpensive, parallel computation, big data & better algorithms.

Worldwide sales of industrial robots by sector

1.2 million to 1.5 million total worldwide stock of operational industrial robots.

$26 billion worldwide market value for robotic systems.

THE FUTURE HOLDs MUCH PROMISE

AI has attracted more than $17 billion in investments since 2009.

Private investment in the AI sector has been expanding, 40 percent a year on average for the past four years, and is expected to continue.

Exponential Growth of Computing

Twentieth through Twenty-first Century

Artificial intelligence will reach human level around the year 2021!

—Ray Kurzweil — Author, Inventor, Futurist

LOGARITHMIC SCALE

CALCULATIONS PER SECOND IN 1,000

1900-1945
1946-1960
1961-1975
1976-1990
1991-2005
2006-2030

All human brain

100 billion neurons

One human brain

One IBM 704

One IBM 360

One PDP-8

One Digital Equipment PDP-11

One Apollo System

One Macintosh

One desktop computer

One smartphone

One server

One supercomputer